DII COE Integration & RunTime Specification (I&RTS)

version 3.1
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NT Advisory Group

Outline

- Background
- Integration & Runtime Specification (I&RTS)
- Overview I&RTS Chapter 6, Windows New Technology (NT)-Based Segments
- Items & Subjects Not Addressed or Completed
- Differences between DISA and NTAG
- Recommendations
- COE NT Architecture Diagram

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Background

- May 98 - Draft Interim Guidance for DII COE NT Developers, out for comment

- July 98 - Briefed DISA Chief Engineer and Deputy Commander on Interim Guidance and demonstrated InstallShield template

- July 98 - Tasked to write I&RTS Windows NT Chapter and COE Level Compliance Checklist (Appendix B)

- Aug 98 - I&RTS Windows NT Chapter 6 and COE Level Compliance Checklists submitted to DISA

  - Eight (8) days to complete chapter 6 and checklist

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Integration & Runtime Specification (I&RTS)

- Follow on to DII COE Interim Development Guidance for Windows NT Platforms

- New Chapter 6, Windows New Technology (NT)-Based Segments

- Updated Compliance Checklists submitted as separate UNIX and NT sections

Overview I&RTS Chapter 6,
Windows New Technology (NT)-Based Segments

- 6.1   Windows NT COE Segmentation
- 6.2   NT-Specific COE Descriptors
- 6.3   Platform Configurations
- 6.4   Reserved Words
- 6.5   Naming Conventions
- 6.6   Network Based Client Devices
- 6.7   Programming Standards

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Overview I&RTS Chapter 6,
Windows New Technology (NT)-Based Segments

- 6.1 Windows NT COE Segmentation
  - 6.1.1 Disk Directory Structure Requirements
  - 6.1.2 Requirements for Full and Abbreviated Segmentation
  - 6.1.3 Abbreviated Segmentation Considerations
- 6.2 NT-Specific COE Descriptors

Overview I&RTS Chapter 6,
Windows New Technology (NT)-Based Segments

- 6.3 Platform Configurations
  - 6.3.1 Windows NT Domains
  - 6.3.2 Windows NT Workgroups
  - 6.3.3 Windows NT Servers
    - 6.3.3.1 Server Disk Partition Structure
    - 6.3.3.2 Server Disk Directory Structure
  - 6.3.4 Windows NT Workstations
    - 6.3.4.1 Workstation Disk Partition Structure
    - 6.3.4.2 Workstation Disk Directory Structure

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Overview I&RTS Chapter 6,
Windows New Technology (NT)-Based Segments

- 6.4 Reserved Words
  - 6.4.1 Segment Prefixes
  - 6.4.2 Environment Variables
  - 6.4.3 Reserved Filenames
  - 6.4.4 Reserved Directory Names
- 6.5 Naming Conventions
  - 6.5.1 Directory Names
  - 6.5.2 Filenames
  - 6.5.3 Registry Keys
  - 6.5.4 TCP/IP Domain Names
  - 6.5.5 SMTP Domains

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Overview I&RTS Chapter 6,
Windows New Technology (NT)-Based Segments

- 6.5 Naming Conventions (con't)
  - 6.5.6 NT Domains
  - 6.5.7 NT COE Resource Domains and Workgroups
  - 6.5.8 Global Groups
  - 6.5.9 Local Groups
  - 6.5.10 User Login Names
  - 6.5.11 NetBIOS and DNS Device Names
    - 6.5.11.1 Server Names
    - 6.5.11.2 Workstation Names
    - 6.5.11.3 Printers and Printer Queues

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Overview I&RTS Chapter 6,
Windows New Technology (NT)-Based Segments

- 6.6 Network Based Client Devices

- 6.7 Programming Standards
  - 6.7.1 Human Computer Interface
  - 6.7.2 Application Programming Interfaces (APIs)
  - 6.7.3 Registry Usage
  - 6.7.4 File System
  - 6.7.5 Filenames
  - 6.7.6 File Extensions
  - 6.7.7 Dynamic Link Libraries
  - 6.7.8 Graphics
  - 6.7.9 Fonts
  - 6.7.10 Printing
  - 6.7.11 Network Considerations

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Items & Subjects Not Addressed or Completed

- Directory structure and names
- TCP/IP domain names
- SMTP domain names
- Use of Local and Global Groups
- User profiles
- Network management (UNIX & NT Integration)
- Workstation management
- Web site configuration

Items & Subjects Not Addressed or Completed (con't)

- Terminal server
- Security Editor
- DNS & WINS & DHCP
- Enterprise software distribution
- Define NT COE road map for the future
- NT 5
  - COM+
  - Active directory
  - etc, etc

Differences between DISA and NTAG

- Preferred segmentation process
  - Full (DISA preferred)
  - Abbreviated (NTAG preferred)
- Separate or consolidated Compliance Checklists (Appendix B, I&RTS)
- Style guide precedence
  - DII Style Guide
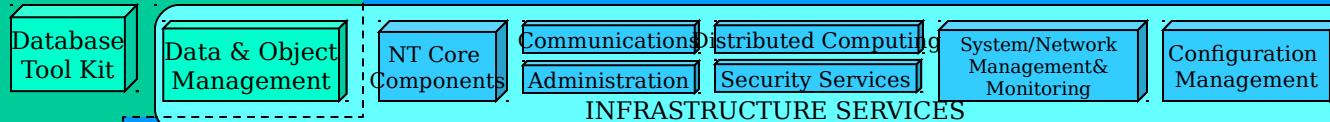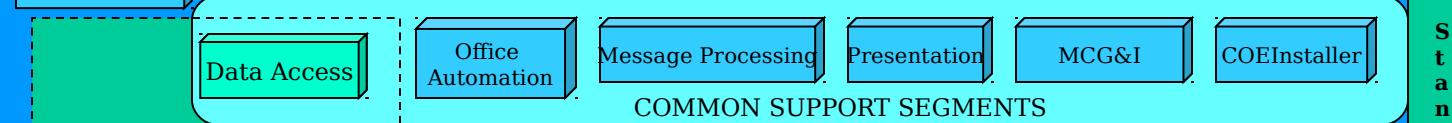 - The Windows Interface Guidelines for Software Design

Recommendations

- Develop NT COE road map, where we should go and how to get there

- Review I&RTS version 3.1 and submit comments via NTAG Chairperson
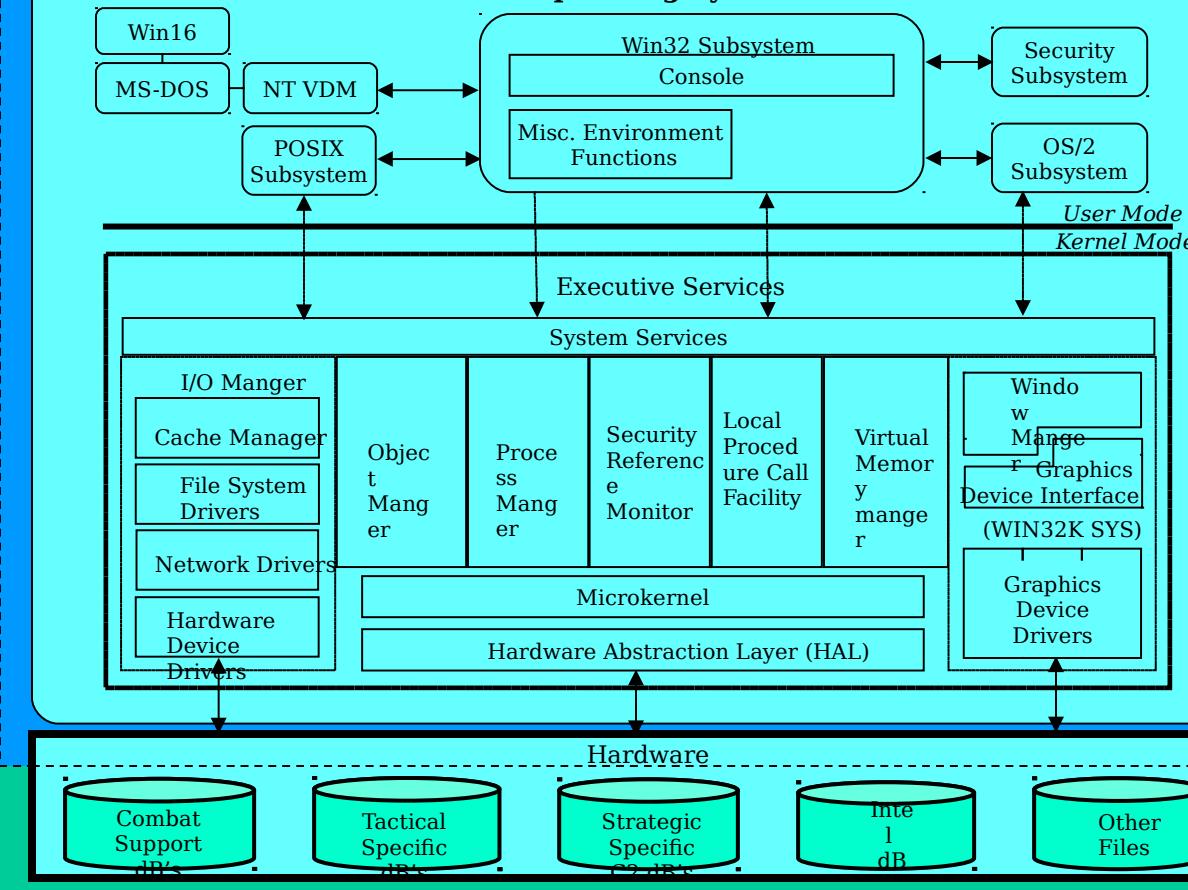
DII COE NT Architecture Diagram

COE

Developers Kit

COMMON SUPPORT SEGMENTS

Data Access | Office Automation | Message Processing | Presentation | MCG&I | COEInstaller

INFRASTRUCTURE SERVICES

Database Tool Kit

Data & Object Management | NT Core Components | Communications | Distributed Computing | System/Network Management& Monitoring | Configuration Management

Administration | Security Services

Operating System

Win16

MS-DOS | NT VDM

Win32 Subsystem
Console

Misc. Environment Functions

POSIX Subsystem

Security Subsystem

OS/2 Subsystem

User Mode
Kernel Mode

Executive Services

System Services

I/O Manger
- Cache Manager
- File System Drivers
- Network Drivers
- Hardware Device Drivers

Object Manger | Process Manger | Security Reference Monitor | Local Procedure Call Facility | Virtual Memory manger

Window Manger
Graphics Device Interface
(WIN32K SYS)

Graphics Device Drivers

Microkernel

Hardware Abstraction Layer (HAL)

Hardware

Combat Support dB's | Tactical Specific dB's | Strategic Specific C2 dB's | Intel dB | Other Files

S H A D E

Standard Application Program Interfaces

Mission Segments

- **Functional Segments**
- **Service C2 Segments**
- **JOINT/CINC Segments**
- **Intelligence Segments**
- **Business Segments**

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